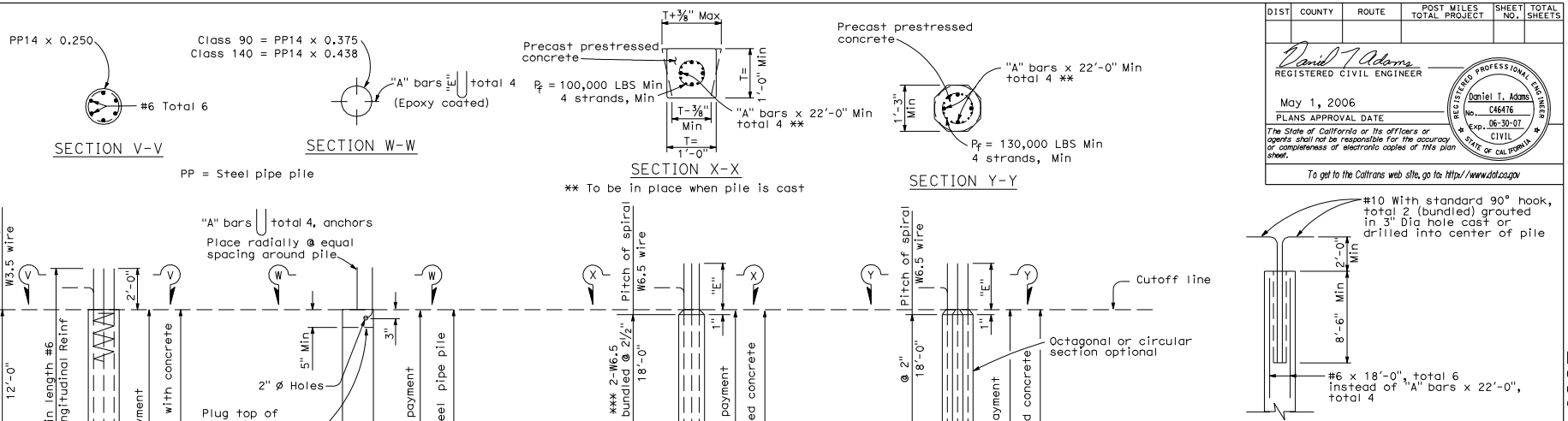
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS

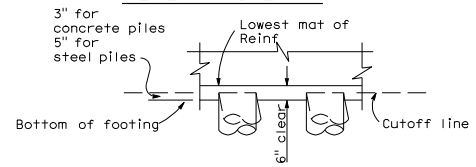
Daniel T. Adams
REGISTERED CIVIL ENGINEER

May 1, 2006
PLANS APPROVAL DATE

Daniel T. Adams
No. C46476
Exp. 06-30-07
CIVIL
STATE OF CALIFORNIA



ALTERNATIVE PILE ANCHOR FOR PRESTRESSED PILES



PILE EMBEDMENT

	Nomimal Resistance (Tension) *	
	Not Required	Required
"A" bars	#6	#8
"E" Dimension	2'-0"	2'-10"

* See Pile Data Table in the Project Plans for Nominal Resistance (Tension) Requirements

NOTES:

1. Details are the same for both Class 90 and Class 140 piles unless noted otherwise.
2. At the Contractor's option, alternative steel pipe with at least the diameter and wall thickness shown on these plans may be used. The diameter shall not exceed 1'-6".
3. Pile reinforcement and steel pile anchor bars extending into a footing shall be hooked as required to provide clearance to top of footing. Piles shall be extended only in accordance with details shown elsewhere in these plans.
4. Lapped splices in spiral pile reinforcement shall be lapped 80 wire diameters minimum. Spiral pile reinforcement at splices and at ends shall be terminated by a 135° hook with 6" tail hooked around a longitudinal bar or strand.
5. 2" clearance to spiral reinforcement shall be maintained if section used is larger than the minimum section shown.
6. Maximum cutoff length at the top of the Alternative "X" and Alternative "Y" Piles is 10'-0".
7. For longitudinal reinforcement and prestressing for anchor piles and load test piles, see "Load Test Pile Details (2)", Standard Plan B2-10.
8. Alternative "W" piles shall not be used for corrosive environments.

DESIGN NOTES

PRECAST PRESTRESSED PILES

P_f = Prestressing force (after losses)

If section used is larger than the minimum section shown, then "P_f" shall provide 700 psi minimum.

Concrete Strength: f'c @ 28 days= 6,000 psi (Alternative "X")
5,000 psi (Alternative "Y")
f'ci @ transfer= 4,000 psi

REINFORCED CONCRETE

f'c = 4,000 psi
fy = 60,000 psi

STEEL PIPE PILE

Fy (Minimum yield strength) = 45,000 psi
Fu (Minimum tensile strength) = 66,000 psi

DESIGN CAPACITY

Class 90
Compression = 90 kip (Service state)
= 180 kip (Nominal axial strength)
Tension = 36 kip (Service state)
= 90 kip (Nominal axial strength)

Class 140
Compression = 140 kip (Service state)
= 280 kip (Nominal axial strength)
Tension = 56 kip (Service state)
= 140 kip (Nominal axial strength)

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PILE DETAILS CLASS 90 AND CLASS 140

NO SCALE

B2-5

07-11-05